

Condensed Survey Results for the Corn Belt (Region 3)

I. Threats to habitats in the Corn Belt (Region 3)

Criteria for inclusion: The following **categories** of threats and **specific threats** were identified as “significant” or “moderate.” The percentages listed below are the combined proportion of respondents indicating these threats as “significant” or “moderate,” excluding those who answered “I don’t know.”

Agriculture and aquaculture: <i>Threats from farming and ranching as a result of agricultural expansion and intensification, including silviculture, mariculture, and aquaculture</i>			
	85.0%	181	
Conversion of habitat to annual crops	84.1%	148	Increase
Annual and perennial nontimber crops	72.4%	126	Increase
Livestock farming and ranching	65.7%	115	Remain the same
Aquaculture	17.6%	24	Remain the same
Wood and pulp plantations	13.0%	21	Remain the same
Residential and commercial development: <i>Threats from human settlements or other nonagricultural land uses with a substantial footprint</i>			
	84.0%	184	
Housing and urban areas	89.9%	161	Increase
Commercial and industrial areas	80.1%	137	Increase
Tourism and recreation areas (e.g., sites with a substantial footprint – golf courses, campgrounds, etc.)	43.4%	75	Remain the same
Invasives and other problematic species and genes: <i>Threats from non-native and native plants, animals, pathogens/microbes, or genetic materials that have or are predicted to have harmful effects on biodiversity following their introduction, spread, and/or increase in abundance</i>			
	83.5%	182	
Invasive/alien species	97.6%	164	Increase
Problematic native species (e.g. overabundant native deer or algae)	73.4%	127	Increase
Plant diseases	68.9%	102	Increase
Introduced genetic material (such as crop, seed stock, biocontrol, stocked/released species, etc.)	62.2%	92	Increase
Natural systems modifications: <i>Threats from human activities that alter, destroy, and disturb habitats and species associated with nonconsumptive uses of biological resources</i>			
	73.0%	157	
Conversion of natural habitats to other land uses	95.4%	145	Increase
Dams and water management/use	63.6%	91	Remain the same
Over-mowing of natural areas	63.5%	87	Remain the same
Log jam removal	42.9%	57	Remain the same
Fire and fire suppression	26.2%	37	Remain the same
Pollution: <i>Threats from introduction of exotic and/or excess materials or energy from point and nonpoint sources</i>			
	72.4%	155	
Agriculture, residential, and forestry effluents	86.8%	131	Increase
Runoff from roads/service corridors	83.7%	128	Increase
Point source pollution from commercial/industrial sources	80.4%	119	Increase
Household sewage and urban water waste	72.7%	109	Increase
Chemical spills	65.8%	96	Remain the same
Air pollution (e.g., smoke, mercury emissions)	61.8%	89	Remain the same
Excess energy (e.g., noise/light pollution, warm water discharge, etc.)	58.6%	82	Increase
Garbage and solid waste	54.8%	80	Remain the same

Human intrusion and disturbance: <i>Threats from human activities that alter, destroy, and disturb habitats and species associated with nonconsumptive uses of biological resources.</i>			
	66.2%	143	
Recreation activities (e.g., ATVs, trail use, horseback riding, high-speed boating, canoeing)	64.7%	90	Increase
Other stressors: <i>Additional threats and stressors directly affecting habitats, such as diseases and genetic diversity issues</i>			
	58.3%	98	
Diseases	90.1%	64	Increase
Low genetic diversity (due to reduced population size, species inbreeding, etc.)	71.3%	62	Increase
Climate change and severe weather: <i>Long-term climactic changes that may be linked to global warming and other severe climactic or weather events outside the natural range of variation that could wipe out vulnerable species or habitat.</i>			
	57.5%	115	
Changing frequency, duration, and intensity of floods	89.2%	99	Increase
Changing frequency, duration, and intensity of drought	87.4%	97	Increase
Shifting and alteration of habitats due to climate change	83.2%	94	Increase
Shifting seasons/phenology	79.6%	86	Increase
Temperature extremes	74.8%	83	Increase
Transportation and service corridors: <i>Threats from long, narrow transport corridors and the vehicles that use them, including associated wildlife mortality</i>			
	49.8%	105	
Roads and railroads	79.8%	83	Increase
Utility and service lines	61.8%	63	Remain the same
Flight paths	21.3%	20	Remain the same
Shipping lanes	14.9%	13	Remain the same
Energy production and mining: <i>Threats from production of nonbiological resources</i>			
	37.5%	75	
Shale gas development (e.g., fracking)	66.2%	43	Increase
Renewable energy production	65.8%	48	Increase
Fossil fuel energy production	52.2%	36	Remain the same
Oil and gas drilling	52.1%	37	Increase
Mining and quarrying	50.0%	35	Remain the same
Biological resource use: <i>Threats from consumptive use of “wild” biological resources including deliberate and unintentional harvesting effects; also persecution or control of specific species</i>			
	32.5%	68	
Forestry practices (e.g., silvicultural methods leading to the lack of early successional habitat)	67.2%	41	Tie - Increase/Remain the same

II. Conservation actions for habitats in the Corn Belt (Region 3)

Criteria for inclusion: The following **categories** of actions and **specific actions** were identified as “very important” or “moderately important.” The percentages listed below are the combined proportion of respondents indicating these actions as “very important” or “moderately important,” excluding those who answered “I don’t know.”

Land/Water/Species Management: <i>Actions directed at conserving or restoring sites, habitats, and the wider environment as well as actions directed at managing or restoring species, focused on the species of concern itself.</i>		85.6%	179
1.	Restore and integrate diversity of habitats into crop-production dominated landscapes	97.3%	36
2.	Reduce losses of fish and wildlife habitats (due to agriculture, urban sprawl, commercial development, etc.)	94.2%	178
3.	Manage urban woodlots	92.3%	12
4.	Restore and integrate diversity of habitats into developed landscapes	92.3%	12
5.	Protect adjacent buffer zones	92.1%	70
6.	Increase acres of riparian buffers	91.9%	170
7.	Reduce stream bank erosion	91.8%	45
8.	Link existing habitat blocks through corridor enhancement in HABITAT	90.7%	166
9.	<i>Link existing habitat blocks through corridor enhancement in barren lands</i>	100.0%	3
10.	<i>Link existing habitat blocks through corridor enhancement in aquatic systems</i>	95.6%	43
11.	<i>Link existing habitat blocks through corridor enhancement in agricultural lands</i>	94.6%	35
12.	<i>Link existing habitat blocks through corridor enhancement in grasslands</i>	90.9%	20
13.	<i>Link existing habitat blocks through corridor enhancement in wetlands</i>	86.4%	19
14.	<i>Link existing habitat blocks through corridor enhancement in forests</i>	85.4%	35
15.	<i>Link existing habitat blocks through corridor enhancement in developed lands</i>	84.6%	11
16.	<i>Enhance corridors in subterranean systems</i>	N/A	N/A
17.	Promote diversity of grassland types and successional stages	90.5%	19
18.	Decrease number of combined sewer overflow events	90.3%	65
19.	Protect natural water regimes (e.g., withdraws, warm-water discharge)	90.3%	65
20.	Develop and promote farming technologies and practices that have conservation benefits (e.g., cover crops, no till)	88.5%	169
21.	Restore habitats and natural systems in HABITAT	88.4%	122
22.	<i>Restore habitats and natural systems in barren lands</i>	100.0%	4
23.	<i>Restore habitats and natural systems in grasslands</i>	95.5%	21
24.	<i>Restore habitats and natural systems in wetlands</i>	95.2%	20
25.	<i>Restore habitats and natural systems in aquatic systems</i>	90.0%	45
26.	<i>Restore habitats and natural systems in forests</i>	78.0%	32
27.	<i>Restore habitats and natural systems in subterranean systems</i>	N/A	N/A
28.	Reestablish natural disturbance regimes in HABITAT	87.2%	75
29.	<i>Reestablish natural disturbance regimes in barren lands</i>	100.0%	4
30.	<i>Reestablish natural disturbance regimes in grasslands</i>	100.0%	22
31.	<i>Reestablish natural disturbance regimes in wetlands</i>	90.5%	19
32.	<i>Reestablish natural disturbance regimes in forests</i>	76.9%	30
33.	<i>Reestablish natural disturbance regimes in subterranean systems</i>	N/A	N/A
34.	Control invasive species in HABITAT	86.9%	166
35.	<i>Control invasive species in barren lands</i>	100.0%	4
36.	<i>Control invasive species in forests</i>	95.1%	39
37.	<i>Control invasive species in developed lands</i>	92.3%	12
38.	<i>Control invasive species in wetlands</i>	87.0%	20
39.	<i>Control invasive species in grasslands</i>	86.4%	19
40.	<i>Control invasive species in aquatic systems (e.g., Asian carp, zebra mussels, invasive aquatic plants)</i>	82.0%	41
41.	<i>Control invasive species in agricultural lands</i>	81.6%	31
42.	<i>Control invasive species in subterranean systems</i>	N/A	N/A
43.	Reduce nutrient and toxin loads (e.g., heavy metals, pharmaceuticals, fertilizers, insecticides)	86.4%	165
44.	Protect and enhance undeveloped shorelines	85.1%	57
45.	Reduce stream head cutting	84.2%	16

46.	Improve integrated pest management	83.3%	30
47.	Promote diversity of wetland types and successional stages	81.0%	17
48.	Improve drainage management	80.8%	147
49.	Promote diversity of forest types and successional stages	77.5%	31
50.	Increase acres enrolled in the Classified Forest and Wildlands Program	77.2%	142
51.	Control problematic native species in HABITAT	65.8%	125
52.	<i>Control problematic species (e.g., deer, raccoon, geese, domestic cat, feral hog, exotic/aggressive vegetation) in developed lands</i>	84.6%	11
53.	<i>Control problematic species (e.g., deer, raccoon, domestic cat, feral hog) in forests</i>	75.6%	31
54.	<i>Control problematic species (e.g., deer, raccoon, skunk, coyote, domestic cat, feral hog) in barren lands</i>	75.0%	3
55.	<i>Control problematic species (e.g., deer, raccoon, geese, domestic cat, feral hog) in agricultural lands</i>	68.4%	26
56.	<i>Control problematic species (e.g., deer, raccoon, domestic cat, feral hog, exotic/aggressive vegetation) in wetlands</i>	59.1%	13
57.	<i>Control problematic native species in aquatic systems</i>	58.0%	29
58.	<i>Control problematic species (e.g., raccoon, skunk, coyote, domestic cat) in grasslands</i>	54.5%	12
59.	<i>Control problematic native species in subterranean systems</i>	N/A	N/A
60.	Decrease E. coli counts	63.2%	43
61.	Reduce recreational overuse of HABITAT	54.9%	73
62.	<i>Reduce recreational overuse of wetlands</i>	65.2%	15
63.	<i>Reduce recreational overuse of grasslands</i>	61.9%	13
64.	<i>Reduce recreational overuse of aquatic systems</i>	53.1%	26
65.	<i>Reduce recreational overuse of forests</i>	47.5%	19
66.	<i>Reduce recreational overuse of subterranean systems</i>	N/A	N/A
67.	Species reintroduction. Please specify:	53.5%	23
68.	Dam removal	49.3%	33
69.	Mine reclamation	44.2%	57
70.	Manage biofuel grasslands	43.6%	24
71.	Ex situ conservation (protection of a species outside of its natural habitat). Please specify:	32.5%	40
72.	Remove log jams	25.5%	12
Education and awareness: <i>Actions directed at people to improve understanding and skills, and influence behavior.</i>		88.5%	193
73.	Educational programs in general	91.5%	172
74.	Educational programs specifically for K-12	84.6%	159
75.	Training programs for stakeholders	83.4%	156
76.	Improvement of signage and other communication materials in conservation areas	63.5%	120
Land/water protection: <i>Actions to identify, establish, or expand parks and other legally protected areas, and to protect resource rights</i>		92.3%	193
77.	Preserve currently existing corridors	92.0%	161
78.	Acquire currently unprotected HABITAT	87.7%	114
79.	<i>Acquire currently unprotected aquatic systems (manage and/or educate for easement habitat values)</i>	91.3%	42
80.	<i>Acquire currently unprotected barren lands</i>	83.3%	5
81.	<i>Acquire currently unprotected forests</i>	75.7%	28
82.	<i>Acquire currently unprotected grasslands</i>	94.4%	17
83.	<i>Acquire currently unprotected wetlands</i>	95.7%	22
84.	<i>Acquire currently unprotected subterranean habitats</i>	N/A	N/A
85.	Reduce conversion to cropland	87.6%	155
86.	Acquire conservation easements to protect important wildlife habitats	85.9%	152
87.	Build/strengthen CRP partnerships	83.3%	145
Law and policy: <i>Actions to develop, change, influence, and help implement formal legislation, regulations, and voluntary standards.</i>		79.5%	163
88.	Improve compliance with and enforcement of current policies	86.5%	135
89.	Reduce urban sprawl through planning and zoning	84.2%	133
90.	Increase regulations on invasive species	78.9%	127
91.	Change current laws, policies, and regulations. Please specify:	75.2%	79

92.	Increase compliance of existing rules and regulations for aquatic systems	73.2%	30
93.	Establish submergent vegetation control guidelines	73.0%	27
94.	Set private sector standards and codes	69.4%	93
95.	Establish legal lake levels	48.6%	17
96.	Establish rules and guidelines for piers and other structures	48.6%	17
Livelihood, economic, and other incentives: <i>Actions to use economic and other incentives to influence behavior</i>		79.3%	161
97.	Promote nonmonetary values of natural systems within the state	81.0%	124
98.	Promote conservation payment programs (e.g., payment for ecosystem services, conservation easements)	80.9%	127
99.	Manage recreational opportunities to be compatible with fish and wildlife habitats	79.1%	125
100.	Support substitution of alternatives for environmentally harmful products and processes	73.2%	112
101.	Link natural resources to livelihoods through nature tourism	66.0%	103
102.	Promote market forces (e.g., creation of a nitrogen trading market, promotion of alternative agricultural markets) as a tool for conservation	65.7%	92
External capacity building: <i>Actions to build the infrastructure to do better conservation</i>		74.6%	150
103.	Develop alliances and partnerships (e.g., between producers, landowners, and conservation professionals)	93.2%	138
104.	Strengthen conservation financing	91.8%	134
105.	Promote use of research and science in conservation decision-making processes	91.3%	136
106.	Increase state's capacity for research and monitoring of conservation actions	87.7%	128
107.	Promote green infrastructure	77.6%	114
108.	Develop institutions and civil society	65.0%	78

III. Participation in conservation actions for habitats in the Corn Belt (Region 3)

Criteria for inclusion: Respondents were asked if their agency/organization had acted or plans to take action in a general category of conservation actions within this region. "I don't know" responses to this question were excluded for this analysis. Responses were aggregated across all habitat types.

Have you taken (since 2005) or do you currently plan to take conservation actions in this category for fish and wildlife habitats within HABITAT in the Corn Belt (Region 3)?

	Yes		No		Total Responses
	%	N	%	N	
Land/water protection	63.6%	105	36.4%	60	165
Land/water/species management	80.1%	129	19.9%	32	161
Education and awareness	89.4%	152	10.6%	18	170
Law and policy	49.3%	72	50.7%	74	146
Livelihood, economic, and other incentives	43.8%	60	56.2%	77	137
External capacity building	52.6%	71	47.4%	64	135